MULTIMEDIA UNIVERSITY®

STUDENT ID NO

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# MULTIMEDIA UNIVERSITY

# FINAL EXAMINATION

**TRIMESTER 3, 2016/2017**

## PIM0245 – INTRODUCTION TO MULTIMEDIA TECHNOLOGY

(Foundation in Information Technology)

26 MAY 2017
9.00 a.m. – 11.00 a.m.
(2 Hours)

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**INSTRUCTIONS TO STUDENT**

1. This question paper consists of **THREE** pages (excluding the cover page).
2. Answer **ALL** questions.
3. Write your answers in the Answer Booklet provided.

**Instructions:** Answer all questions. Write your answers in the Answer Booklet.

## QUESTION 1 [10 Marks]

a. People are attracted to use various multimedia product available in the market. Define briefly each of the terms below:

(3 marks)

i. Multimedia
ii. Interactive multimedia
iii. Hypermedia

b. Multimedia product can be categorized into several groups. What is reference product? Describe **ONE (1)** characteristic of this product and give **TWO (2)** examples to support your answer.

(3 marks)

c. There are number of processes and considerations required during the development of a multimedia system. Name all stages involved in a multimedia development process.

(2 marks)

d. Identify **TWO (2)** considerations required to determine the content that need to be presented in a multimedia system.

(2 marks)

## QUESTION 2 [10 Marks]

a. Storyboard is one of the most common techniques used by multimedia developer to design the architectural drawing of a multimedia system. Explain briefly about storyboard and name **TWO (2)** elements that can be included into a storyboard.

(2 marks)

b. Hotspots and menus are the component of multimedia interfaces. Describe briefly the difference between these two components.

(2 marks)

c. The statement below is about PostScript font. Read and determine if the statement is true or false. Write "**True**" for a true statement and "**False**" for a false statement.

(3 marks)

i. PostScript characters are scalable and can be drawn much faster.
ii. There are two types of PostScript fonts which are Type 3 and Type 1.
iii. PostScript fonts do not require any special software to display.
iv. In PostScript, it used image representation of the characters.
v. Postscript is a method of describing an image in terms of mathematical constructs.
vi. The major disadvantage of PostScript font is it requires a lot of memory.

**Continued...**

d. Jackie is a graphic designer. He is being assigned to create all graphic files for a courseware. Based on discussion, the team has decided to use GIF (Graphics Interchange Format) for the button, with the height and width of 100 and 250 pixels. This courseware is suitable for display resolution with the setting of 800 x 600. Based on this situation, answer the following questions.

i. Calculate the image resolution for the button.

(1 mark)

ii. Calculate the file size of the button in KB.

(2 marks)

**QUESTION 3 [10 Marks]**

a. Animators prefer to use computer animations instead of cel animation technique. What is the difference between these two techniques?

(2 marks)

b. What is kinematics and morphing? Give **ONE (1)** example for each of these techniques.

(4 marks)

c. Explain briefly the features listed below:

(4 marks)

i. Editing Features
ii. Playback Features
iii. Delivery Features
iv. Internet Playability

**QUESTION 4 [10 Marks]**

SoftSkillsTech Company is selected to develop an online application for chemistry subject. It must have a login page for student to access the application. This is the first phase of the development. The application will consist of three lessons which are Topic1, Topic2 and Topic 3. Students are allowed to choose any lesson from the menu and every lesson is integrated with elements such as video, animation and audio to enhance student's understanding. For Topic1, it will also have another menu at the end of the lesson named as Quiz. Students are required to complete all lessons to enable them to do the quiz.

a. Identify the suitable category of multimedia product for this online application and state **TWO (2)** advantages of using it.

(2.5 marks)

b. There are numbers of considerations involved in the development of this online application especially related to the content. List **TWO (2)** considerations before SoftSkillsTech Company determine the content for the application.

(2 marks)

**Continued...**

c. Suggest the **MOST** suitable navigation structure for the above scenario. Draw the navigation structure to support your answer.

(5.5 marks)

## QUESTION 5 [10 marks]

Zack and his group are required to develop an E-learning modules which include web-based teaching materials, videos, discussion boards, games, learning management software, and e-mails. As requested by clients, all elements of the content need to be viewed individually and organized in sequences.

a. Propose and explain briefly the **BEST** category of multimedia authoring tools for Zack to develop this module. Give **TWO (2)** examples of the tools.

(3 marks)

b. Zack has created a video to be included into the e-learning module as details below. Calculate the raw size of this digital video file in MB (show details of calculation):

(7 marks)

| Duration | Frame Rate | Frame size | Color depth | Sampling rate | Sound Resolution | Channel |
|---|---|---|---|---|---|---|
| 0.5 minutes | 25 | 240 by 180 | 16-bit | 44.1 kHz | 16-bit | Stereo |

**End of Paper**